

**REMARKS**

Claims 1-74 are pending in the application, with claims 1-33 and 35-43 being under examination. Claims 34 and 44-74 have been withdrawn from consideration as being directed to a non-elected invention. Claims 1, 16, 30, 32 and 42 have been amended above. Support for the amendments can be found throughout the application as filed. In particular, support for the amendments to claims 1, 16 and 32 can be found at, for example, page 41, lines 21-26; page 16, line 13 through page 17, line 20; page 17, line 26 through page 19, line 17; page 18, lines 3-4, and page 34, line 19 through page 35, line 28. Support for the amendments to claims 30 and 42 can be found at, for example, page 31, lines 17-19. Applicants have reviewed the rejections set forth in the Office Action mailed September 7, 2004, and respectfully traverse all grounds for the reasons that follow.

Applicants thank Examiners Smith and Marschel for extending a personal interview with Applicants' representatives on November 23, 2004. The amendments above and remarks below are believed by Applicant to address the subject matter discussed during the interview. Applicants respectfully request the Examiner's reconsideration and withdrawal of these rejections.

**Rejections Under 35 U.S.C. § 101**

Claims 1-33 and 35-43 stand rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. The Office maintains that the claims either lack a physical transformation outside the computer or lack a practical application. Claims 1-33 and 35-43 also stand rejected for being directed to non-statutory subject matter allegedly because the methods merely manipulate numbers or abstract idea.

Applicants maintain that the claimed invention is directed to statutory subject matter. Claims 1, 16 and 32 have been amended to clearly specify that the claimed method of predicting a behavior of a biochemical system includes producing a comparison of data integration maps and that the identified correlative changes predict a behavior of the biochemical system which is indicative of a changing condition. The claimed methods identify actual changes in components of the biochemical system which, as described above, are useful to diagnose diseases or